Closure Report

APPROVED

By Olivia Yu at 7:33 am, Mar 13, 2018

	Site Description	
Site Name:	Pygmy 27 State #003H	NMOCD grants
Company:	COG Operating	closure to 1RP-4824.
Legal Description:	U/L B, Section 27, T21S, R33E	
County:	Lea County, NM	
GPS Coordinates:	N 32.45676° W-103.55802°	

Release Data

Date of Release:	09/23/2017
Type of Release:	Oil
Source of Release:	Compromised valve
Volume of Release:	7 bbls
Volume Recovered:	0.5 bbls

Remediation Specifications									
Remediation Parameters:	Excavate the areas near SP1, SP2, SP3, SP4, SP5, SP6, SP7, and SP11 to a depth of 6 inches. Excavate the areas near SP8, SP9, and SP10 to a depth of 1.5 feet. Obtain confirmation samples as indicated on the map. Backfill the site with clean soil.								
Remediation Activities:	01/23/2018 to 0	2/07/2018							
Plan Sent to OCD:	11/22/17	Email from Cliff Brunson to Olivia Yu							
OCD Approval of Plan:	12/20/17	Email from Olivia Yu to Cliff Brunson							
Plan Sent to BLM:	n/a	n/a							
BLM Approval of Plan:	n/a	n/a							

	Supporting Documentation							
Initial C-141	Signed 09/25/2017							
Final C-141	Signed 02/09/2018							
Site Diagram	October 2017							
Groundwater Plot	150'-175'							
TOPO Maps	October 2017							
Lab Summary	10/16/2017-10/17/2017 and 02/05/2018							
Lab Analysis	10/16/2017-10/17/2017 and 02/05/2018							
Correspondence	Request and approval of remediation plan via email							

Request for Closure

Based on the completion of the remediation plan, BBC International requests closure approval from NMOCD.

Cliff Brunson, President, BBC International Inc.

02/19/2018

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

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			Rele	ase Notifica	atio	n and Co	rrective A	ction			
						OPERA 1	OR	🖂 In	itial Report		Final Report
Name of Co	ompany: C	OG Operati	ng LLC [OGRID] 229137		Contact: Ro					
		inois Avenue					lo. 432-230-007	17			
Facility Na	me: PYGM	IY 27 STAT	E #003H			Facility Typ	e: Battery				
Surface Ow	ner: Privat	e		Mineral Ov	vner:	State		API	No. 30-025-4	2068	
				LOCA	гю	N OF REI	EASE				
Unit Letter	Section	Township	Range	Feet from the		h/South Line	Feet from the	East/West Lin	e	County	r
B	27	21S	33E	190*		North	1980*	East		Lea	
				Latitude 32.4	66523	39 Longitude	- 103.5581741				
				NATI	JRE	OF RELI	CASE				
Type of Rele	ase:					Volume of		Volum	e Recovered:		
Oil						7 bbls Oil		0.5 bb			
Source of Re Valve	elease:					Date and H	our of Occurrenc 9:00 am		id Hour of Dis 017 9:00 am	covery:	
Was Immedia	ate Notice C	liven?				If YES, To		1 2 2 2 2	717 7.00 un		
			Yes 🛛	No 🛛 Not Req	uired						
By Whom? Was a Water		1				Date and H					
was a water	course Read		Yes 🛛	No		11 165, VO	lume Impacting t	ne watercourse.			
If a Watercou	urse was Im	pacted, Descri	ibe Fully *								
						RF	CEIVED				
						By	Olivia Yu a	at 4:06 pr	n, Sep 20	5, 20 °	
		em and Remed									
The release plug was inst		when a valve o	on the back	side of the casing	was le	eft in the wrong	g position. The v	alve was placed	in the correct a	position	and a bull
		and Cleanup A	Action Tak	en.*							
ŵ		-									
The release o	Concho y	the well pad a vill have the si	nd in the a nill area ex	djacent pasture. Va aluated for any po	icuum ssihle	n trucks were d	ispatched to reco	ver all standing will present a r	fluid and micro	oblaze w rk plan t	as applied
NMOCD for	approval pr	ior to any sigr	nificant rei	nediation activities		impact nour a	te retease and we	will present a n	incontanton wo	ik pian i	o uic
Than-1	C. 41. 4 41 1	- C		:		de la trace d'anna		1		000	
				is true and comple d/or file certain rel							
public health	or the envir	onment. The	acceptanc	e of a C-141 report	by th	ie NMOCD ma	rked as "Final Re	port" does not r	elieve the oper	ator of I	iability
				investigate and rer tance of a C-141 re							
federal, state,	, or local lav	vs and/or regu	lations.	tance of a C-141 re	portu	loes not reneve	: the operator of r	esponsibility to	compliance w	nin any (buner
	15	× .					OIL CONS	SERVATIO	N DIVISIC	N	
Signature:	Du	SI	\sim					0	٩Λ	_	
Digitatore.					_	Approved by	Environmental Sp	vecialist.			
Printed Name	e: Dakota N	leel				Approved by					
Title: HSE Co	oordinator					Approval Date	9/26/2017	Expiratio	n Date:		
										1	
E-mail Addre	ess: <u>dneel2@</u>	concho.com			_	Conditions of	Approval:		Attached		
Date: Septe	ember 25, 2	017 Pho	one: 575-7	46-2010		see attac	ched directiv	/e			
Attach Addit									-		
						1RP-4824	InOY17	26958109	YOq	17269	58330
									- I - I'		

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _9/25/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-4824_ has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _10/26/2017_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

• Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

• Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

• Nominal detection limits for field and laboratory analyses must be provided.

• Composite sampling is not generally allowed.

• Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold OCD Environmental Bureau Chief 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3465 jim.griswold@state.nm.us

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Oil Conservation Division Subn 1220 South St. Francis Dr.

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

1220 S. St. Franc	cis Dr., Santa	i Fe, NM 87505	i	Sa	nta Fe	, NM 875	05						
			Rele	ease Notific	ation	and Co	rrective A	ctior	1				
						OPERA	ſOR		🔲 Initia	al Report	\boxtimes	Final R	eport
Name of Co				X			bert McNeill			``			
			-	nd, TX 79701			lo. 432-230-00	77					
Facility Nan	ne: Pygm	y 27 State #0)03H			Facility Typ	e: Battery						
Surface Own	ner: Priva	te		Mineral O	wner:	State			API No	. 30-025-4	2068		
				LOCA	TION	OF REI	LEASE						
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/	West Line	County			
В	27	21S	33E	190	ľ	North	1980		East	Lea Count	v. NM		
				Latitude <u>N 32.4</u>	56520	Longitu		1			,		
						-		/					
Type of Relea				NAT	URE	OF RELI Volume of			1V-1				
Type of Relea	ase. On					7 bbls	Release:		0.5 bbls	Recovered:			
Source of Rel	lease: Valv	e					our of Occurrenc	e		Hour of Dis		-	
Was Immedia	te Notice C	Jiven?				1f YES, To	@ 9:00 am Whom?		09/23/201	7 @9:00 an	n	_	
			Yes 🛛	No 🛛 Not Re	quired								
By Whom?						Date and H							
Was a Watero	course Read		Yes 🛛	No		If YES, Vo	lume Impacting t	he Wat	ercourse.				
16 - 11/												_	_
If a Watercou	irse was im	pacted, Descr	ioe runy.	r		Δ	PROVE	D					
				5									
						By	Olivia Yu	at 7.	:32 am	, Mar 1	3, 20)18	
Describe Cau	se of Probl	em and Reme	dial Action	n Taken.*									
The release o	courred wh	en a volve on	the backs	de of the casing w	as laft i	n the urone r	ocition The value		nlagod in th		itian an	d a hull	
plug was inst			the backs	de of the casing w	as lett h	a me wrong p	osmon. The vary	ve was j	placed in up	e contect po:			
Describe Are	a Affacted	and Cleanup	Action Tal	· · · · · ·									
Describe Are	a Affecteu	and Creanup /	ACTION 140	ten									
				adjacent pasture.									
				g to OCD standard MOCD via emai			plan was created.	Remed	liation was	completed in	n accord	lance wi	th
											_		
				is true and compl id/or file certain re									
public health	or the envi	ronment. The	acceptant	e of a C-141 repo	rt by the	NMOCD m	arked as "Final R	eport" o	lons for rele	eases which ieve the oper	may end rator of	liability	
should their c	perations h	ave failed to	idequately	investigate and re	emediate	e contaminati	on that pose a thr	eat to g	round water	, surface wa	iter, hun	nan heal	th
or the enviror federal, state,				tance of a C-141	report do	oes not reliev	e the operator of a	respons	ibility for c	ompliance w	vith any	other	
		-					OIL CON	SERV	ATION	DIVISIC)N		
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Signature: /	and	n ····			···-	Approved by	Environmental S	nacialia	U'\	~			
Printed Name	e: Rebecca	Haskell	,			-the second s							
Title: Senior	HSE Coor	dinator				Approval Dat	e: 3/13/2018	3	Expiration 1	Date: XX/X	xx/xx>	x	
E-mail Addre	ss: rhaske	ll@concho.co	m			Conditions of	Approval:			Attached			
Date: Februa			Dha	ne: (432) 683-744	12					Attached			
Attach Addi		ets If Necess		ne. (452) 065-744	ן ני			_					

1RP-4824



Sample points, hand auger

SP1, N 32.45699 W-103.55875

- SP2, N 32.45696 W-103.55857
- SP3, N 32.45681 W-103.55871
- SP4, N 32.45686 W-103.55849
- SP5, N 32.45669 W-103.55859
- SP6, N 32.45669 W-103.55839
- SP7, N 32.45654 W-103.55845
- SP8, N 32.45654 W-103.55824
- SP9, N 32.45643 W-103.55829
- SP10, N 32.45640 W-103.55819
- SP11, N 32.45690 W-103.55882
- NORTH, N 32.45707 W-103.55878
- SOUTH, N 32.45630 W-103.55820
- EAST, N 32.45654 W-103.55815
- WEST, N 32.45690 W-103.55889

Confirmation sample points, hand auger

- C1, N 32.45689 W-103.55877
- C2, N 32.45682 W-103.55860
- C3, N 32.45657 W-103.55858
- C4, N 32.45662 W-103.55845
- C5, N 32.45673 W-103.55834
- C6, N 32.45650 W-103.55835
- C7, N 32.45647 W-103.55825
- C8, N 32.45637 W-103.55829
- C9, N 32.45645 W-103.55816

Leak Point, N 32.45656 W-103.55820

COG, Pygmy 27 State #003H U/L B, Section 27, T21S, R33E Groundwater: 150'-175'



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the (R=POD has been POD suffix indicates replaced, the POD has been O=orphaned, (quarters are 1=NW 2=NE 3=SW 4=SE) replaced & no longer C=the file is serves a water right closed) file.) (quarters are smallest to largest) (NAD83 UTM in meters) (In feet) POD Sub-QQQ Water basin County 64 16 4 Sec Tws Rng Y DistanceDepthWellDepthWater Column **POD Number** Code Х CP 01349 POD1 CP LE 2 3 1 27 21S 33E 635304 3591576 317 1188 572 616 CP 01357 POD1 CP LE 33E 3591347 868 1286 578 708 4 3 1 27 21S 634782 CP 01355 POD1 CP LE 2 1 3 27 21S 33E 634773 3591061 1056 1192 582 610 CP 01411 POD2 3590380 1433 CP LE 1 2 34 21S 33E 635534 1125 CP 01411 POD1 CP LE 2 2 34 21S 33E 635968 3590386 1498 1149 Average Depth to Water: 577 feet 572 feet Minimum Depth: Maximum Depth: 582 feet Record Count: 5 UTMNAD83 Radius Search (in meters): Easting (X): 635515 Northing (Y): 3591814 **Radius:** 1700 The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

8/2/17 9:13 AM

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WATER COLUMN/ AVERAGE DEPTH TO WATER

UTM Conversion Tool

	Public Land Survey System (PLSS) Q64: Q16: NW Q4: NE Sec: 27 Tws: 21S Rng: 33E	
	Q64: Q16: NW Q4: NE Sec: 27 Tws: 21S Rng: 33E	
8	State Plane Coordinate System - NAD27	
	X: ft Y: ft Zone:	
2	State Plane Coordinate System - NAD83	
	X: ft Y: ft Zone:	
	Degrees/Minutes/Seconds	
2	Longitude (X): Degrees: ° Minutes: ' Seconds: "	
	Latitude (Y): Degrees: ° Minutes: ' Seconds: "	
	UTM - NAD27 Easting (X): mtrs Northing (Y): mtrs Zone:	
	Lasting (X). This Northing (T). This Zone.	
	SUBMIT	1
	All Conversion Results are displayed as <u>NAD 1983 UTM Zone 13</u>	
2	Easting (X): 635515.0 mtrs Northing (Y): 3591814.0 mtrs	
	~~ Please keep screen open to copy UTM values for Reports. ~~	

COG, Pygmy 27 State #3H



COG, Pygmy 27 State #3H



Laboratory Analytical Results Summary Pygmy 27 State #003H

			SP1 @			
		Sample ID	SURFACE	SP1 @ 1'	SP1 @ 6'	SP1 @ 11'
Analyte	Method	Date	10/16/17	10/16/17	10/16/17	10/16/17
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		< 0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		0.124	< 0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		< 0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		<16.0	48	32	32
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		480	<10.0	n/a	n/a
EXT DRO	TPH 8015M		230	<10.0	n/a	n/a

		Sample ID	SP2 @ SURFACE	SP2 @ 1'	SP2 @ 6'	SP2 @ 11'
Analyte	Method	Date	10/16/17	10/16/17	10/16/17	10/16/17
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		< 0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		0.064	< 0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		<16.0	<16.0	<16.0	<16.0
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		465	<10.0	n/a	n/a
EXT DRO	TPH 8015M		225	<10.0	n/a	n/a

			SP3 @			
		Sample ID	SURFACE	SP3 @ 1'	SP3 @ 6'	SP3 @ 11'
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		0.195	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		< 0.050	< 0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		368	<16.0	<16.0	32
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		2110	<10.0	n/a	n/a
EXT DRO	TPH 8015M		796	<10.0	n/a	n/a

		Sample ID	SP4 @ SURFACE	SP4 @ 1'	SP4 @ 6'	SP4 @ 11'
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		0.109	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	<0.300	n/a	n/a
Chloride	SM4500CI-B		320	<16.0	<16.0	16
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		2300	<10.0	n/a	n/a
EXT DRO	TPH 8015M		900	<10.0	n/a	n/a

		Sample ID	SP5 @ SURFACE	SP5 @ 1'	SP5 @ 6'	SP5 @ 11'
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		0.113	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	< 0.300	n/a	n/a
Chloride	SM4500CI-B		384	<16.0	<16.0	<16.0
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		9070	<10.0	n/a	n/a
EXT DRO	TPH 8015M		2660	<10.0	n/a	n/a

		Sample ID	SP6 @ SURFACE	SP6 @ 1'	SP6 @ 6'	SP6 @ 11'
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		0.058	<0.050	n/a	n/a
Toluene	BTEX 8021B		0.263	<0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		0.108	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		1	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		1.43	< 0.300	n/a	n/a
Chloride	SM4500CI-B		336	<16.0	<16.0	<16.0
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		9210	<10.0	n/a	n/a
EXT DRO	TPH 8015M		2780	<10.0	n/a	n/a

			SP7 @			
		Sample ID	SURFACE	SP7 @ 1'	SP7 @ 6'	SP7 @ 11'
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		< 0.050	<0.050	n/a	n/a
Toluene	BTEX 8021B		0.051	< 0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		< 0.050	< 0.050	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		< 0.300	< 0.300	n/a	n/a
Chloride	SM4500CI-B		352	<16.0	<16.0	<16.0
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		9140	<10.0	n/a	n/a
EXT DRO	TPH 8015M		2660	<10.0	n/a	n/a

			SP8 @				
		Sample ID	SURFACE	SP8 @ 1'	SP8 @ 2'	SP8 @ 7'	SP8 @ 12'
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.200	<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		0.627	< 0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		2.07	<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		8.65	<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		11.3	< 0.300	n/a	n/a	n/a
Chloride	SM4500CI-B		560	1540	80	96	320
GRO	TPH 8015M		431	<10.0	n/a	n/a	n/a
DRO	TPH 8015M		20000	180	n/a	n/a	n/a
EXT DRO	TPH 8015M		5140	152	n/a	n/a	n/a

Laboratory Analytical Results Summary Pygmy 27 State #003H

			SP9 @				
		Sample ID	SURFACE	SP9 @ 1'	SP9 @ 2'	SP9 @ 7'	SP9 @ 12'
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.200	< 0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		0.57	<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		2.08	< 0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		8.82	<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		11.5	<0.300	n/a	n/a	n/a
Chloride	SM4500CI-B		592	2040	96	80	<16.0
GRO	TPH 8015M		411	<10.0	n/a	n/a	n/a
DRO	TPH 8015M		17100	67.2	n/a	n/a	n/a
EXT DRO	TPH 8015M		3900	50.7	n/a	n/a	n/a

CARDINAL POINTS		Sample ID	NORTH @ SURFACE	EAST @ SURFACE	WEST @ SURFACE	SOUTH @ SURFACE
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	< 0.050	< 0.050	< 0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150	<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300	<0.300	<0.300
Chloride	SM4500CI-B		16	16	<16.0	<16.0
GRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0
EXT DRO	TPH 8015M		<10.0	<10.0	<10.0	<10.0

			SP10 @				
		Sample ID	SURFACE	SP10 @ 1'	SP10 @ 2'	SP10 @ 7'	SP10 @ 12'
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		<0.200	< 0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		0.684	<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		2.47	< 0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		10.4	<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		13.6	<0.300	n/a	n/a	n/a
Chloride	SM4500CI-B		512	1190	16	16	16
GRO	TPH 8015M		476	<10.0	n/a	n/a	n/a
DRO	TPH 8015M		18100	24.1	n/a	n/a	n/a
EXT DRO	TPH 8015M		4480	14.2	n/a	n/a	n/a

			SP11 @			
		Sample ID	SURFACE	SP11 @ 1'	SP11 @ 6'	SP11 @ 11'
Analyte	Method	Date	10/17/16	10/17/16	10/17/16	10/17/16
			mg/kg	mg/kg	mg/kg	mg/kg
Benzene	BTEX 8021B		0.059	< 0.050	n/a	n/a
Toluene	BTEX 8021B		0.258	< 0.050	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	<0.050	n/a	n/a
Total Xylenes	BTEX 8021B		0.217	<0.150	n/a	n/a
Total BTEX	BTEX 8021B		0.534	<0.300	n/a	n/a
Chloride	SM4500CI-B		352	80	48	48
GRO	TPH 8015M		<10.0	<10.0	n/a	n/a
DRO	TPH 8015M		1650	<10.0	n/a	n/a
EXT DRO	TPH 8015M		600	18.5	n/a	n/a

Laboratory Analytical Results Summary Pygmy 27 State #3H

Confirmation		Sample ID	C1
Analyte	Method	Date	2/5/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		48
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Confirmation		Sample ID	C4
Analyte	Method	Date	2/5/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		48
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Confirmation		Sample ID	C7
Analyte	Method	Date	2/5/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		32
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Confirmation		Sample ID	C2
Analyte	Method	Date	2/5/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		32
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Confirmation		Sample ID	C5
Analyte	Method	Date	2/5/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		48
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Confirmation		Sample ID	C8
Analyte	Method	Date	2/5/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		64
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Confirmation		Sample ID	C3
Analyte	Method	Date	2/5/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		48
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Confirmation		Sample ID	C6
Analyte	Method	Date	2/5/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		< 0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		48
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Confirmation		Sample ID	C9
Analyte	Method	Date	2/5/18
			mg/kg
Benzene	BTEX 8021B		< 0.050
Toluene	BTEX 8021B		< 0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500CI-B		32
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0



October 27, 2017

Cliff Brunson BBC International, Inc. P.O. Box 805

Hobbs, NM 88241

RE: PYGMY 27 STATE #3H

Enclosed are the results of analyses for samples received by the laboratory on 10/20/17 15:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	10/20/2017	Sampling Date:	10/16/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 1 @ SURFACE (H702885-01)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.59	
Toluene*	0.124	0.050	10/24/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/24/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/24/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.2	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	480	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	230	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	83.8	28.3-16	4						
Surrogate: 1-Chlorooctadecane	104 9	34.7-15	7						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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Received:	10/20/2017	Sampling Date:	10/16/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 1 @ 1 (H702885-02)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.59	
Toluene*	<0.050	0.050	10/24/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/24/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/24/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.5	% 72-148							
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	<10.0	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	81.2	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	93.1	% 34.7-15	7						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	10/20/2017	Sampling Date:	10/16/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 1 @ 6 (H702885-03)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 1 @ 11 (H702885-04)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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Received:	10/20/2017	Sampling Date:	10/16/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 2 @ SURFACE (H702885-05)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.59	
Toluene*	0.064	0.050	10/24/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/24/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/24/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.2	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	465	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	225	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	91.1	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	103 9	34.7-15	7						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	10/20/2017	Sampling Date:	10/16/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 2 @ 1 (H702885-06)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.59	
Toluene*	<0.050	0.050	10/24/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/24/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/24/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.0	% 72-148							
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	<10.0	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	88.1	% 28.3-16-	4						
Surrogate: 1-Chlorooctadecane	95.5	% 34.7-15	7						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	10/20/2017	Sampling Date:	10/16/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 2 @ 6 (H702885-07)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 2 @ 11 (H702885-08)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 3 @ SURFACE (H702885-09)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.59	
Toluene*	0.195	0.050	10/24/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/24/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/24/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/24/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.4	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	2110	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	796	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	86.2	28.3-16	4						
Surrogate: 1-Chlorooctadecane	136 9	34.7-15	7						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 3 @ 1 (H702885-10)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	<0.050	0.050	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	100	% 72-148							
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	<10.0	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	88.0	% 28.3-16-	4						
Surrogate: 1-Chlorooctadecane	96.4	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 3 @ 6 (H702885-11)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 3 @ 11 (H702885-12)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 4 @ SURFACE (H702885-13)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	0.109	0.050	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.3	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	2300	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	900	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	85.9	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	143 9	34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 4 @ 1 (H702885-14)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	<0.050	0.050	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 72-148							
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	<10.0	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	85.5	% 28.3-16-	4						
Surrogate: 1-Chlorooctadecane	94.9	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 4 @ 6 (H702885-15)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 4 @ 11 (H702885-16)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 5 @ SURFACE (H702885-17)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	0.113	0.050	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.9	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	9070	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	2660	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	90.9	28.3-16	4						
Surrogate: 1-Chlorooctadecane	340 9	34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 5 @ 1 (H702885-18)

BTEX 8021B	mg,	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	<0.050	0.050	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	104	% 72-148							
Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	<10.0	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	92.1	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	101	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 5 @ 6 (H702885-19)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 5 @ 11 (H702885-20)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 6 @ SURFACE (H702885-21)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.058	0.050	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	0.263	0.050	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	0.108	0.050	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	1.00	0.150	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	1.43	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	101	% 72-148	}						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	9210	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	2780	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	87.7	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	362	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 6 @ 1 (H702885-22)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	<0.050	0.050	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	105	% 72-148							
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	<10.0	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	86.9	% 28.3-16-	4						
Surrogate: 1-Chlorooctadecane	90.5	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 6 @ 6 (H702885-23)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 6 @ 11 (H702885-24)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 7 @ SURFACE (H702885-25)

BTEX 8021B	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	0.051	0.050	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	% 72-148							
Chloride, SM4500Cl-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	9140	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	2660	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	88.7	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	315	% 34.7-15	7						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 7 @ 1 (H702885-26)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	<0.050	0.050	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	115 9	% 72-148							
Chloride, SM4500Cl-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	<10.0	10.0	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/23/2017	ND					
Surrogate: 1-Chlorooctane	81.7	% 28.3-16-	4						
Surrogate: 1-Chlorooctadecane	90.8	% 34.7-15	7						

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Celey D. Keene, Lab Director/Quality Manager


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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 7 @ 6 (H702885-27)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 7 @ 11 (H702885-28)

Chloride, SM4500Cl-B	mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 8 @ SURFACE (H702885-29)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	10/25/2017	ND	2.01	101	2.00	2.59	
Toluene*	0.627	0.200	10/25/2017	ND	2.02	101	2.00	3.05	
Ethylbenzene*	2.07	0.200	10/25/2017	ND	2.01	101	2.00	2.84	
Total Xylenes*	8.65	0.600	10/25/2017	ND	6.00	99.9	6.00	3.56	
Total BTEX	11.3	1.20	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	147	% 72-148	2						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	431	100	10/23/2017	ND	190	95.0	200	1.54	
DRO >C10-C28	20000	100	10/23/2017	ND	206	103	200	2.01	
EXT DRO >C28-C36	5140	100	10/23/2017	ND					
Surrogate: 1-Chlorooctane	170	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	736	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 8 @ 1 (H702885-30)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	<0.050	0.050	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	97.0	% 72-148							
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1540	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/24/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	180	10.0	10/24/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	152	10.0	10/24/2017	ND					
Surrogate: 1-Chlorooctane	76.6	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	83.3	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 8 @ 2 (H702885-31)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 8 @ 7 (H702885-32)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 8 @ 12 (H702885-33)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	10/25/2017	ND	432	108	400	0.00	

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 9 @ SURFACE (H702885-34)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	0.570	0.200	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	2.08	0.200	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	8.82	0.600	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	11.5	1.20	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	145	% 72-148	2						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	411	100	10/25/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	17100	100	10/25/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	3900	100	10/25/2017	ND					
Surrogate: 1-Chlorooctane	160	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	576	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 9 @ 1 (H702885-35)

BTEX 8021B	mg,	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	<0.050	0.050	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	98.6	% 72-148							
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2040	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/24/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	67.2	10.0	10/24/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	50.7	10.0	10/24/2017	ND					
Surrogate: 1-Chlorooctane	72.8	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	81.0	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 9 @ 2 (H702885-36)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 9 @ 7 (H702885-37)

Chloride, SM4500Cl-B	mg,	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 9 @ 12 (H702885-38)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 10 @ SURFACE (H702885-39)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	0.684	0.200	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	2.47	0.200	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	10.4	0.600	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	13.6	1.20	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	149	% 72-148	2						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	476	100	10/25/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	18100	100	10/25/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	4480	100	10/25/2017	ND					
Surrogate: 1-Chlorooctane	182	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	621	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 10 @ 1 (H702885-40)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	<0.050	0.050	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	% 72-148							
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1190	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/24/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	24.1	10.0	10/24/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	14.2	10.0	10/24/2017	ND					
Surrogate: 1-Chlorooctane	73.9	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	81.7	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 10 @ 2 (H702885-41)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 10 @ 7 (H702885-42)

Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 10 @ 12 (H702885-43)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 11 @ SURFACE (H702885-44)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.059	0.050	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	0.258	0.050	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	0.217	0.150	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	0.534	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	% 72-148							
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/24/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	1650	10.0	10/24/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	600	10.0	10/24/2017	ND					
Surrogate: 1-Chlorooctane	71.8	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	112 9	% 34.7-15	7						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 11 @ 1 (H702885-45)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	<0.050	0.050	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 72-148							
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/24/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	<10.0	10.0	10/24/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	18.5	10.0	10/24/2017	ND					
Surrogate: 1-Chlorooctane	75.5	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	84.4	% 34.7-15	7						

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Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SP 11 @ 6 (H702885-46)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/25/2017	ND	432	108	400	0.00	

Sample ID: SP 11 @ 11 (H702885-47)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	10/25/2017	ND	432	108	400	0.00	

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: NORTH @ SURFACE (H702885-48)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	<0.050	0.050	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	% 72-148							
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/24/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	<10.0	10.0	10/24/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	<10.0	10.0	10/24/2017	ND					
Surrogate: 1-Chlorooctane	77.6	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	88.1	% 34.7-15	7						

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Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: EAST @ SURFACE (H702885-49)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	<0.050	0.050	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 9	% 72-148							
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/24/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	<10.0	10.0	10/24/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	<10.0	10.0	10/24/2017	ND					
Surrogate: 1-Chlorooctane	78.9	% 28.3-16	4						
Surrogate: 1-Chlorooctadecane	85.2	% 34.7-15	7						

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Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: WEST @ SURFACE (H702885-50)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	<0.050	0.050	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	% 72-148							
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/24/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	<10.0	10.0	10/24/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	<10.0	10.0	10/24/2017	ND					
Surrogate: 1-Chlorooctane	74.2	% 28.3-164	4						
Surrogate: 1-Chlorooctadecane	73.7	% 34.7-152	7						

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Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	10/20/2017	Sampling Date:	10/17/2017
Reported:	10/27/2017	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #3H	Sampling Condition:	Cool & Intact
Project Number:	(9-23-17)	Sample Received By:	Tamara Oldaker
Project Location:	LEA COUNTY, NM 176		

Sample ID: SOUTH @ SURFACE (H702885-51)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/25/2017	ND	1.83	91.3	2.00	1.51	
Toluene*	<0.050	0.050	10/25/2017	ND	1.84	91.9	2.00	2.45	
Ethylbenzene*	<0.050	0.050	10/25/2017	ND	1.81	90.7	2.00	1.94	
Total Xylenes*	<0.150	0.150	10/25/2017	ND	5.42	90.3	6.00	1.92	
Total BTEX	<0.300	0.300	10/25/2017	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	% 72-148							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/25/2017	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/24/2017	ND	174	86.8	200	4.40	
DRO >C10-C28	<10.0	10.0	10/24/2017	ND	185	92.6	200	5.21	
EXT DRO >C28-C36	<10.0	10.0	10/24/2017	ND					
Surrogate: 1-Chlorooctane	69.1	28.3-16	4						
Surrogate: 1-Chlorooctadecane	76.8	% 34.7-15	7						

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

(50	(505) 393-2326 FAX (505) 393-24/b	a	BILL TO		ANALYSIS REQUEST
Project Manager:	Cliff Brunson		P.O. #:		
Address: P.O. Bo	Box 805		Company:	60	
city: Hobbs	State: NM	Zip: 88241	Attn:	1	
Phone #: 575-397-6388	Fax #:	575-397-0397	Address:	-N	
Project #:		scoc .	City:	<	
ame:	27-	9-23-17	State: Zip:	2	
2	9410.06	/	Phone #:	A AL	
Sampler Name:	Voff Ornelss		1	L Z C	
FOR LAB USE ONLY	1 1 20	MATRIX	PRESERV. SAMPLING	34	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER : ACID/BASE: ICE / COOL OTHER :	TIME	
2	sple Sul	***	X /0-/6	95° × × ×	
4	11	CV X		14 11 1	
-07	20202N	EV X	X	020 × × ×	
4		C/ X	X	NO X	
200	50305ch	5 1 2	Z/0/ 7	2 × 5 10	
/D PLEASE NOTE: Liability and Dama analyses. All claims including those	ges. Cardinal's liability and client's exclusive ten for negligence and any other cause whatsoever	sofy for any claim arising whether based in contract or shall be deemed waived unless made in writing and re shall be deemed waived unless made in writing and re	Saim arising whether based in contrast or fort, shall be limited to the amount paid by the dilent for the mad waived unless made is writing and received by Cardinal within 30 days after completion of the applicable med waived unless made is writing and received by contrast within 30 days after completion of the applicable med waived unless made is writing and received by contrast within 30 days after completion of the applicable med waived unless made is writing and received by contrast within 30 days after completion of the applicable med waived unless made is writing and received by contrast within 30 days after completion of the applicable med waived unless made is writing and received by contrast within 30 days after completion of the applicable med waived unless the completion of the applicable med waived unless made is writing and received by contrast of the applicable med waived unless the set of the contrast of the applicable med waived unless the applicable med waived med waived med waived med waived med waived med waived med waived med waived med waived med med med med med med med m	the diant for the npietion of the applicable , its subsidiaries.	
Relinquished By: Relinquished By:	Apple 1 and the performance of service herein and a service herein and the performance of service herein and the s	whether such c ly: ly: ly: ly: ly:	have yoon any of the above stated was	Phone Result: 2 Yes 2 No Fax Result: 2 Yes 2 No REMARKS:	io Add'I Phone #: io Add'I Fax #:
Delivered By: Sampler - UPS -	(Circle One) _ O. S. c. - Bus - Other: Possible tiel	Sample Condition Cool Intact Dres Pres No No	No HECKED BY: / ct (Initials), //5 Yes		
† Cardinal c	10000	W.ONC I NO I	NO		

Page 40 of 45

Company Name: BBC International, Inc.	BILL	1 70	ANALYSIS REQUEST
Project Manager: Cliff Brunson	P.O. #:		
1 1 S C S Z			
city: Hobbs State: NM Zip:	o: 88241 Attn:	4	
5-397-6388	7-0397 Address:	10	
	C C City:	I en	
Project Name: LIGHAN 27-3H	9-23-/7 State:	Zip:	
Project Location: UU 776	Phone #:		
Sampler Name: 1/0	Fax		
and the state of the state	MATRIX PRESERV.	SAMPLING H	
Lab I.D. Sample I.D.	# CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :	DATE TIME TH	
11 Sp306	X	112 2/2 1/0/	
13 Spapel 6	, , , , , ,	630 × ×	
14 · 5	XX	200	
16 Sunch Cul		7 2 6/01	
3 weache BI	X X	× × 220/ .	
97	isim arisino whether based in contract or tort, shall be limited	ted to the amount pdfd by the client for the	7
2.EASE. NOTE: Laboury and usingles carries array one cause whatsoever shall be deen mayses. At claims including those for neglence and any other cause whatsoever shall be deen service. In no event shall cardinal be lable for incidental or consequential damages, including with.	eived by Card of use, or loss	within 30 days after completion of the applicable yoffis incurred by client, its subsidiaries, a choice estated reasons or otherwise	
e of services hereunder by Can Date: /-	Received By:	Phone Result: Yes	No Add'l Phone #: No Add'l Fax #:
Pular 15 Time: 40 0	Received By:		1.00
Time:			
Delivered By: (Circle One) _ 0.5 c	Sample Condition CHECKI Cool Infact (Initi	(Initials)	

Page 41 of 45

Page 42 of 45

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(out) out	(909) 999-2920 Find (900) 000 - 110		BILL TO	ANA	ANALYSIS REQUEST
	Cliff Brunson		P.O. #:		
			Company:		
city: Hobbs	State: NM	zip: 88241	Attn:	100	
Phone #: 575-397-6388	Fax #:	-0397	Address:	ve	
Project #:	Project Owner:	C06	City:	te	
Project Name: Py G	MG 27-3H	4-23-17	State: Zip:	XXX	
Project Location:	2411		Phone #:	LI X	
Sampler Name:	1/10		1	E	
FOR LAB USE ONLY		A. MATRIX	PRESERV. SAMPLING	Z	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OM # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER : ACID/BASE: ICE / COOL OTHER : DATE	TP B	
ds 15	2000	X	21 240/ 2	X So	
200	12	C X	X /2	X X	
24 Sp	26 Sul	2-1 ×	12/2	9 X X X	
36	H M		X	XX	
1 de (65	10034	4.4. ¹ 1	S/ N t	2000 4 X X X X X	
PLEASE NOTE: Liability and Damages. Cardina's liability and client's e analyses. All claims including those for negligence and any other cause		edy for any claim arising whether based in contrac shall be deemed waived unless made in writing an including without limitation, business interruptions.	cousive remedy for any claim arising whether based in contrast or fort, shall be initided to the amount paid by the client for the windscover shall be deemed waved unless made in writing and received by Catalatian whith 30 days after completion of the applicable windscover shall be deemed without initiation, business interruptions, loss of use, or loss of profits incurred by client, its subaidianes, a classing without initiation, business interruptions, loss of use, or loss of profits incurred by client, its subaidianes,	suent for the fon of the applicable subsidiaries,	
Relinquished BY: Relinquished BY:	Date: 1	Received By:	s based uson any of the above stated readons or on Phone Fax R REMA	Result: □ Yes □ No esult: □ Yes □ No RKS:	Add'l Phone #: Add'l Fax #:
Delivered By: (Circle One)	Time:	Sample Condition	n CH		
Sampler - UPS - Bus -	2	COOI IIItact	Finite St		

Company Name: B	BBC International Inc	BILL TO	ANALYSIS REQUEST
2.0	Ci Ici,	P.O. #:	
Address: P.O. Box 805	x 805	Company:	
0	State: NM Zip: 88241	Attn:	
Phone #: 575-397-6388	-	Address:	
Project #:	Project Owner: OC	City:	X
Project Name:	41-53-4 HS-21-4	State: Zip:	test
set I oration.	7412 (. C	Phone #:	
Project Location.	410	Fax #:	240
EDBLARUSE ONLY	MATRIX	PRESERV. SAMPLING	3
Lab I.D.	(G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL	SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER : DATE	7 <i>P</i> /
702 885 41 42		17 0 × 0	
£7, 15	spilesur cil z	× × 233	
84 Ch	North OSUL CI	× , 308	XXX
PLEASE NOTE: Liability and Da	cause whatsoever shall be deemed waived unless	any whether dised in contract or tort, shall be limited to the africunt paid by the client for the any whether dised in contract or tort, shall be limited to the africunt paid by the client for the ed unless, made in writing and received by Cardinal within 30 days after completion of the applicability ed unless, made in writing and received by Cardinal within 30 days after completion of the applicability and unless, made in writing and received by Cardinal within 30 days after completion of the applicability of the days abuddatives.	ter fe 9 the apticable Garee
Relinquished By:	anangen, hereunder by Cardinal, regardiese div genome hereunder by Received By imme: 400 Received By ate: 400 Received By	The such dame traved upon any of the above stated travents or otherwater Phone Result: Fax Result: REMARKS:	wwe desult: □ Yes □ No Add'I Phone #: ult: □ Yes □ No Add'I Fax #: KS:
Delivered By: (Circle One)	Circle One) 0.5 C Sample Condition	dition CHECKED BY:	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-355-

Page 44 of 45

V

Company Name: BBC Inte	BBC International, Inc.	BILL TO	ANALTSIS REQUEST
	unson	P.O. #: Company:	
city: Hobbs	State: NM Zip: 88	88241 Attn:	
Phone #: 575-397-6388	(J)	Address:	
Project #:	Project Owner:	City:	
Project Name: Project	m 27-3H 9-	Z S - Z State: Zip:	
Project Location:	7410	Phone #:	141-
Sampler Name:	1/2	Fax #:	
FOR LAB USE ONLY	RS		
	G)RAB OR ((ROUNDWA VASTEWATE SOIL SLUDGE DTHER : ACID/BASE: CE / COOL DTHER : DATE	
2885	- #	× 50 50 × 10-17-	XXX
51 70.	th when		
negi	nce	sporey and yours a subserver versory or without limitation business made in writing and received by Cardinal within 30 days after completion of the applicable and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable days after completion without initiation business internuotions. Joss of use, or loss of profits inourised by client, its subsidiaries, and applicable days after completion without initiation business internuotions.	s of the applicable bs/danies,
Relinquished By:	Timpe performance of services heres	is taued upon any of the above stated real	Phone Result: Yes No Add" Phone #: Fax Result: Yes No Add" Fax #: REMARKS:
	Time:	CHECKED BY	

Page 45 of 45

† Cardinal cannot accept verbal changes.



February 14, 2018

Cliff Brunson BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: PYGMY 27 FEDERAL #3H

Enclosed are the results of analyses for samples received by the laboratory on 02/08/18 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	02/08/2018	Sampling Date:	02/05/2018
Reported:	02/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 FEDERAL #3H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: 1 (H800412-01)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	1.75	87.4	2.00	23.7	
Toluene*	<0.050	0.050	02/10/2018	ND	1.77	88.5	2.00	22.3	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	1.76	87.9	2.00	23.4	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	5.25	87.5	6.00	22.5	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 72-148							
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/12/2018	ND	416	104	400	3.77	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2018	ND	198	98.8	200	9.18	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	199	99.3	200	11.2	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	78.4	% 41-142							
Surrogate: 1-Chlorooctadecane	78.1	% 37.6-14	7						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	02/08/2018	Sampling Date:	02/05/2018
Reported:	02/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 FEDERAL #3H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: 2 (H800412-02)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	1.75	87.4	2.00	23.7	
Toluene*	<0.050	0.050	02/10/2018	ND	1.77	88.5	2.00	22.3	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	1.76	87.9	2.00	23.4	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	5.25	87.5	6.00	22.5	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 72-148							
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/12/2018	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2018	ND	214	107	200	1.66	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	205	103	200	5.99	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	82.8	% 41-142							
Surrogate: 1-Chlorooctadecane	81.6	% 37.6-14	7						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	02/08/2018	Sampling Date:	02/05/2018
Reported:	02/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 FEDERAL #3H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: 3 (H800412-03)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	2.32	116	2.00	5.11	QR-03
Toluene*	<0.050	0.050	02/10/2018	ND	2.29	114	2.00	4.15	QR-03
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	2.25	112	2.00	5.56	QR-03
Total Xylenes*	<0.150	0.150	02/10/2018	ND	6.78	113	6.00	5.31	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 9	% 72-148							
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/12/2018	ND	432	108	400	0.00	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2018	ND	214	107	200	1.66	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	205	103	200	5.99	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	84.7	% 41-142							
Surrogate: 1-Chlorooctadecane	83.7	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	02/08/2018	Sampling Date:	02/05/2018
Reported:	02/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 FEDERAL #3H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: 4 (H800412-04)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	2.32	116	2.00	5.11	
Toluene*	<0.050	0.050	02/10/2018	ND	2.29	114	2.00	4.15	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	2.25	112	2.00	5.56	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	6.78	113	6.00	5.31	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 72-148							
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/12/2018	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2018	ND	214	107	200	1.66	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	205	103	200	5.99	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	81.2	% 41-142							
Surrogate: 1-Chlorooctadecane	79.6	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	02/08/2018	Sampling Date:	02/05/2018
Reported:	02/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 FEDERAL #3H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: 5 (H800412-05)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	2.32	116	2.00	5.11	
Toluene*	<0.050	0.050	02/10/2018	ND	2.29	114	2.00	4.15	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	2.25	112	2.00	5.56	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	6.78	113	6.00	5.31	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	115 9	% 72-148	,						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/12/2018	ND	432	108	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2018	ND	214	107	200	1.66	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	205	103	200	5.99	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	87.7	% 41-142							
Surrogate: 1-Chlorooctadecane	87.2	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	02/08/2018	Sampling Date:	02/05/2018
Reported:	02/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 FEDERAL #3H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: 6 (H800412-06)

BTEX 8021B	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	1.62	80.9	2.00	6.60	
Toluene*	<0.050	0.050	02/10/2018	ND	1.62	81.0	2.00	7.59	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	1.61	80.7	2.00	7.90	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	4.77	79.6	6.00	7.17	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 72-148	,						
Chloride, SM4500CI-B	mg/	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/12/2018	ND	432	108	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2018	ND	214	107	200	1.66	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	205	103	200	5.99	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	89.8	% 41-142							
Surrogate: 1-Chlorooctadecane	89.9	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	02/08/2018	Sampling Date:	02/05/2018
Reported:	02/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 FEDERAL #3H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: 7 (H800412-07)

BTEX 8021B	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	1.62	80.9	2.00	6.60	
Toluene*	<0.050	0.050	02/10/2018	ND	1.62	81.0	2.00	7.59	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	1.61	80.7	2.00	7.90	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	4.77	79.6	6.00	7.17	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 72-148							
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/12/2018	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2018	ND	214	107	200	1.66	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	205	103	200	5.99	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	83.7	% 41-142							
Surrogate: 1-Chlorooctadecane	81.4	% 37.6-14	7						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	02/08/2018	Sampling Date:	02/05/2018
Reported:	02/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 FEDERAL #3H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: 8 (H800412-08)

BTEX 8021B	mg,	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	1.62	80.9	2.00	6.60	
Toluene*	<0.050	0.050	02/10/2018	ND	1.62	81.0	2.00	7.59	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	1.61	80.7	2.00	7.90	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	4.77	79.6	6.00	7.17	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	114 9	% 72-148	,						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/12/2018	ND	432	108	400	0.00	
TPH 8015M	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2018	ND	214	107	200	1.66	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	205	103	200	5.99	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	86.0	% 41-142							
Surrogate: 1-Chlorooctadecane	85.1	% 37.6-14	7						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



BBC International, Inc. Cliff Brunson P.O. Box 805 Hobbs NM, 88241 Fax To: (575) 397-0397

Received:	02/08/2018	Sampling Date:	02/05/2018
Reported:	02/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 FEDERAL #3H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: 9 (H800412-09)

BTEX 8021B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2018	ND	1.62	80.9	2.00	6.60	
Toluene*	<0.050	0.050	02/10/2018	ND	1.62	81.0	2.00	7.59	
Ethylbenzene*	<0.050	0.050	02/10/2018	ND	1.61	80.7	2.00	7.90	
Total Xylenes*	<0.150	0.150	02/10/2018	ND	4.77	79.6	6.00	7.17	
Total BTEX	<0.300	0.300	02/10/2018	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	% 72-148							
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	02/12/2018	ND	432	108	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/13/2018	ND	214	107	200	1.66	
DRO >C10-C28*	<10.0	10.0	02/13/2018	ND	205	103	200	5.99	
EXT DRO >C28-C36	<10.0	10.0	02/13/2018	ND					
Surrogate: 1-Chlorooctane	85.5	% 41-142							
Surrogate: 1-Chlorooctadecane	82.6	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-C	
USTODY /	
AND ANA	
ALYSIS F	
REQUEST	

101 East Marland, Hobbs, NM 88240

Company Name: RRC International In-		
Project Manager: Cliff Brunson	BILL TO	ANALYSIS REQUEST
Address: P.O. Box 805	下.0. 非	
city: Hobbs State: NM Zin: 88	Company:	
5-397-		
õ l		
Project Name: Myney 27 Ted 34		
Project Location:	state: Zip:	
hile B	Phone #:	
FOR LAB USE ONLY	Fax#:	
OMP.	MATRIX PRESERV. SAMPLING	
HS00412 GRAB OR (C)O # CONTAINERS GROUNDWATER	WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :	BTE
000- 	2518 930	
000	0101 X152	
x 1 x 1	25 X 050 X	
PLEASE NOTE: Liability and Damagne Conducts in the	2518 1050	
e for neg be liable of or tplat	rgence and any other cause whatspeere shall be deemed waived unless made in whiting and rot tort, shall be limited to the amount paid by the client for the for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, and To The performance of services hereundergy drag by Candhau the subsidiaries interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, and To The performance of services hereundergy of candhau, regardless of whether such claims based upon any of the above name of the above for	
Date: HIS Received Time: 3. Copin Date: 5.18 Received	By: Ward John Westerner Ward And And And And And And And And And An	s □ No Add'I Phone #: s □ No Add'I Fax #:
to - 2450		
† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476	changes to 505-393-2476	

From:	Yu, Olivia, EMNRD
То:	Cliff Brunson
Cc:	Becky Haskell; Ken Swinney; Jennifer Gilkey; Kathy Purvis
Subject:	RE: COG Pygmy 27 State #003H (1RP-4824) - Delineation Workplan
Date:	Wednesday, December 20, 2017 11:15:08 AM
Attachments:	approved 1RP4824 Delineation Workplan, Pygmy 27 State #003H.pdf

Mr. Brunson:

NMOCD approves of the delineated completed and proposed remediation for 1RP-4824. In the remediation report, on an appropriately scaled map, please include the release point. Also, please establish one of the confirmation sample location on the border between the proposed 6-inch and 1.5 ft excavation areas.

Thanks,

Olivia Yu Environmental Specialist NMOCD, District I <u>Olivia.yu@state.nm.us</u> 575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Cliff Brunson [mailto:cbrunson@bbcinternational.com]
Sent: Wednesday, November 22, 2017 1:50 PM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>
Cc: Becky Haskell <rhaskell@concho.com>; Ken Swinney <kswinney@bbcinternational.com>; Jennifer Gilkey <jgilkey@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>
Subject: COG Pygmy 27 State #003H (1RP-4824) - Delineation Workplan

Olivia,

Please find the attached Delineation Workplan and remediation proposal for the COG Pygmy 27 State #003H (1RP-4824). COG is requesting that you review this plan and is looking forward to the OCD's approval.

If you have any questions, please let me know.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS President BBC International, Inc. World-Wide Environmental Specialists Mailing Address: P. O. Box 805 Hobbs, NM 88241-0805 USA Shipping Address: 1324 W. Marland St. Hobbs, NM 88240 USA Phone: (575) 397-6388 Fax: (575) 397-0397 E-Mail: cbrunson@bbcinternational.com



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